

REMARKS AND DISCUSSION

Upon entry of the present amendment, the application includes claims 1-20 of which, Claims 1, 5 and 6 are independent. Claims 1, 3, 4 and 6-12 are amended herein. New claims 13-20 are being added by the present amendment. No claims have been canceled or withdrawn by the present amendment.

The above-identified Office Action has been reviewed, the references carefully considered, and the Examiner's comments carefully weighed. In view thereof, the present Amendment is submitted. It is contended that by the present amendment, all bases of rejection set forth in the Office Action have been traversed and overcome. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Amendments to the Specification: Paragraph [0027] has been amended to further define the subject matter of the invention as a light guide consisting of substantially half oval pieces and further defining the term “substantially half”. Applicant notes that the disclosure had previously recited “quarter” ovals. Quarter oval pieces is a better description as the pieces are substantially quarter of a three-dimensional solid oval. However, “substantially half” ovals refers to the two-dimensional cross-section of the light-guide piece which is a more common and correct terminology.

Amendments to the Claims: Claims 1, 6, 8, 10 and 12 have been amended to explicitly claim the emitting face as a light-emitting face. Claims 1 and 6 have been amended to recite that: the end face is at a longitudinal end; and the curved surfaces of the oval arc curves or

paraboloid curves have differently shaped areas such that light emitted after being reflected by the two curved surfaces concentrate at different distances from the curved surfaces. Claims 3 and 4 have been amended to specify the “half pieces” as “substantially half pieces” to further define the structure of the claimed invention. Claims 7, 9 and 11 have been amended to change the language “characterized in that” to comprising, and (again) to define that the end face is at a longitudinal end of the light guide.

New claims 13-20 have been added by the present amendment to claim subject matter previously disclosed but not claimed. New claims 13-16 define that the light guide is shaped such that light is emitted in a line shape through said light-emitting face. New claims 16-18 define that the light guide further comprises a bottom face opposite to said light-emitting face, and a light scattering part formed with the bottom face. New claims 19-20 define that the light guide further comprises a bottom face opposite to said light-emitting face, and the light-emitting face includes portions disposed at different distances from the bottom face.

Applicant respectfully submits that all of the above amendments are fully supported by the original application, including the drawings and paragraph [001] of the specification.

Applicant also respectfully submits that the above amendments do not introduce any new matter into the application.

Claim Rejections – 35 USC § 102

In item 2 of the Office Action the Examiner rejected claims 1-3, 5 and 6 under 35 USC § 102(b) as anticipated by Patel et al. (EP 1 085 256 A1), which discloses a method and apparatus

for collecting light involving a hollow elliptical reflector 12, a light source 14 disposed within the reflector, and optical fiber bundles 16, 18 having uniquely shaped ends which receive substantially all the light from the light source and distribute the light to various locations within a vehicle or the like.

Applicant's Response

Upon careful consideration and in light of the above amendments to claims 1 and 6, applicant respectfully traverses the rejection under § 102(b) and submits that each of claims 1-3, 5 and 6 is patentably distinct over the Patel reference because Patel's light collecting apparatus does not include multiple features required by each of the rejected claims.

In this regard, applicant notes that Patel's reflector-based apparatus is fundamentally distinct from the claimed invention because it is not a light guide, and does not guide light incident on an end face to a light-emitting face thereof, but only reflects / collects light from an internal light source, and does not otherwise address or overcome the problem which is desirably overcome by the claimed invention, as discussed at paragraphs [0003] – [0004].

Specifically, applicant submits that Patel fails to disclose the following features of the claimed invention set forth in independent claims 1, 5 and 6: a light guide having an end face, and an emitting face extending longitudinally of the guide; and such a guide which emits light incident on the end face from the emitting face. Applicant notes that the reflector 12 of Patel's apparatus is actually a hollow structure shaped substantially as a closed half ellipsoid having a

closed end which reflects light from the light source 14 situated within the reflector and an open end through which reflected light 20 is emitted. There is no emitting “face” in Patel’s collector.

Further, applicant notes that Patel fails to disclose the feature defined in claim 5 that “...a difference in focal distance between the oval arc curves causes the concentrating positions of reflected lights to be *different* (emphasis added)”, noting that the focal distance of the two halves 22, 24 is actually the same in Patel’s collector; and the feature of dependent claim 3 that the light guide includes two substantially half pieces connected together, noting that Patel’s reflector 12 is integrally formed / molded as a unitary member.

Applicant submits that the Examiner’s broad interpretations of various aspects of Patel’s collector, e.g., an open end of the reflector being a light emitting face, the two halves 22, 24 of the reflector having different focal distances, the closed end of the reflector 12 as an end face having light incident thereon and the two halves 22, 24 of the reflector being half pieces connected together *are unreasonable* given on the plain meaning of these terms, the meaning given to these terms by the present disclosure, and Patel’s actual disclosure.

Applicant notes that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Based on the reasons put forth above, applicant submits that Patel et al. do not disclose / anticipate each and every aspect of the claimed invention.

Although applicant disagrees with the rejection based on Patel, in order to expedite prosecution of the application, applicant has amended independent claims 1 and 6 to recite the limitation that: the end face is at a longitudinal end of the guide, and the curved surfaces of the oval arc curves or paraboloid curves have differently shaped areas such that light emitted after being reflected by the two curved surfaces concentrate at different distances from the curved surfaces. Applicant respectfully submits that Patel fails to disclose or in any way suggest such features.

Based on the foregoing , the rejection based on Patel is believed to be overcome, and it is respectfully requested that the rejection be reconsidered and withdrawn.

Claim Rejections – 35 USC § 103

Claim 4

In item 9 of the Office Action the Examiner rejected claim 4 under § 103(a) as obvious over Patel in view of Makoto (US 2001/0035986). Applicant notes that the Makoto reference should actually be referred to as Ikeda, but will continue to refer to it as Makoto to avoid confusion. The Examiner asserts that it would have been obvious for one skilled in the art at the time of the invention to combine the light-scattering pattern 41b as taught by Makoto with the light guide 10 as disclosed by Patel to make the claimed invention obvious.

Applicants Response

Applicant respectfully traverses the Examiner's rejection of claim 4 under § 103(a) based on the foregoing reasons discussed in relation to claim 1 (which are not overcome by Makoto). Further, Applicant submits that the Examiner's proposed modification of Patel's light collector relative to a select feature of Makoto is based on impermissible hindsight based on the present disclosure, rather than from any teaching, suggestion or motivation of the references themselves.

Applicant notes (as discussed above) that the light guide 10 of Patel is actually a hollow reflector which is fundamentally distinct from a bar-shaped light guide such as disclosed by Makoto. For example, the hollow reflector does not have any surfaces near the center of its hollow interior. Conversely, light-scattering pattern 41b disclosed by Makoto is actually a pattern printed on a *surface* within the light guide, near the focal point of the light guide. As another example, the light source of Makoto is disposed outside of the light guide adjacent to one longitudinal end thereof, whereas Patel's light source is (again) disposed centrally within the hollow interior of the reflector. Therefore, Applicant submits that persons of ordinary skill in the art would never consider it obvious to combine the printed light-scattering pattern of Makoto with the light guide of Patel, as proposed by the Examiner, because these devices include incompatible structures, and because there is no surface near the focal point of the light guide of Patel on which the pattern could be printed.

Claims 7-12

In item 11 of the Office Action the Examiner rejected claims 7-12 under 35 USC § 103(a) as obvious over Makoto and further in view of Patel. Regarding claims 7, 9 and 11, the Examiner claims that it would have been obvious, for one skilled in the art at the time of the invention, to modify the light guide disclosed by Makoto to resemble the light guide disclosed by Patel in order to provide two separate converging points for the light guide.

Applicant's Response

Again, applicant respectfully disagrees with the Examiner's rejection of claims 7-12 under § 103(a) based on the foregoing reasons discussed in relation to claims 1, 5, 6 (which are not overcome by Makoto), and because the proposed modification of Makoto's bar-shaped light guide/ image reader relative to a select feature of Patel's light collector is improperly based on a suggestion coming entirely from the Examiner guided by impermissible hindsight of the present disclosure, rather than from any teaching, suggestion or motivation of the references themselves.

Relative to the proposed modification of Makoto's image reader / light guide, applicant again submits that the hollow reflector light guide 10 of Patel is fundamentally distinct from a bar-shaped light guide disclosed by Makoto, and includes features which are incompatible therewith as discussed above. As such, applicant respectfully submits that persons skilled in the art would not consider the proposed modification to be obvious as the references actually provide no reason or motivation for same.

For all the reasons put forth above, Applicant respectfully submits that claims 4 and 7-12 are not made obvious by any of the references cited either singly or in any hypothetical combination. Further, Applicant submits that the claims as amended are in condition for allowance and requests acknowledgement of the same by the Examiner. Lastly, Applicant notes that claims 4 and 7-12 all depend from claims 1, 5 and 6 which are believed to be in condition for allowance based on the amendments and arguments presented herein.

Other Matters

New claims 13-20 are believed to be allowable over the references of record based on the foregoing arguments concerning the merits of claims 1, 5, 6, as well as on the merits of the additional features set forth in these new claims.

Conclusion

Applicant respectfully submits that as presently amended, all of the pending claims are believed to be allowable.

It is applicant's contention that no possible reading of the references, either singly or in any reasonable combination, can be viewed as teaching applicant's claimed invention.

For all of the above mentioned reasons, applicant requests reconsideration and withdrawal of the rejection of record, and allowance of the pending claims.

The application is now believed to be in condition for allowance and a notice to this effect is earnestly solicited.

Favorable consideration is respectfully requested.

Respectfully submitted,



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